

**PATENT APPLICATION No. 10/660,976**  
**Applicants: Franco Vitaliano and Gordana Vitaliano**  
**Response To Detailed Action Comments of 9/22/06**  
**October 13, 2006, FedEx Air bill # 858896775025**

All other listed documents have no specific bearing in any way on the instant application and are viewed as being background information, only, as they do not specifically teach how to create bio-engineered laser light source elements and systems with ARC characteristics using bio-engineered clathrin protein, which also have utility in quantum information processing.

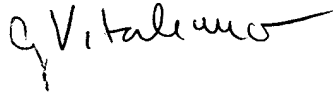
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**Incorporated As Reference, Re Section D.4. In Inventors' Response**

- Alivisatos, AP, Semiconductor Clusters, Nanocrystals, and Quantum Dots, Science, pp. 933-937, 1996
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**Incorporated As Reference, Re Section D.5. In Inventors' Response**

**7,113,967**, "Efficient quantum computing operations", Cleve, et al. September 26, 2006, whose specification states, "Other examples of qubits include quantum dots, linear quantum optics plus single photon detectors, neutral atoms in optical lattices, electrons flowing on Helium, surface acoustic waves and silicon-based proposals."

**7,113,598**, "Methods and systems for high-data-rate quantum cryptography", Flusberg, et al., September 26, 2006, which among its claims is, "...a photon supplying system capable of supplying a plurality of substantially single photons spaced apart in time; ..."

**7,019,875**, "Method and apparatus for single-photon source and quantum memory", Pittman, et al., March 28, 2006, whose abstract states, "An optical switch and optical storage loop are used as the basis of a single-photon source and a quantum memory for photonic qubits..."

**6,819,474**, "Quantum switches and circuits", Beil, et al. November 16, 2004, whose abstract states, "Quantum switches, referred to as trisistors, operate on the basis of interactions between two elementary particles (EP), such as photons, electrons, phonons, etc."

**6,678,450**, "Optical method for quantum computing", Franson, January 13, 2004, whose abstract states, "An optical method for quantum computing that makes use of nonlocal effects to construct the quantum gates themselves. A nonlocal interaction in which pairs of atoms interchange two photons produces a large nonlinear phase shift. These nonlinear phase shifts are used to construct quantum logic gates, such as a Controlled-NOT."

**5,940,193**, "General purpose quantum computing", Hotaling, et al August 17, 1999, whose abstract states, "Method and apparatus are provided for a general purpose photonic computer. A data signal is input through an encoder to encode such signal with an instruction. The encoded signal is transmitted by means of a

**Re Section D.5. In Inventors' Response, Cont.**

laser beam to an input buffer where it interferes with a reference beam so as to form an interference pattern therein as a hologram... Thus the present invention teaches a novel exploitation of photon-induced, quantum-mechanical spin transitions in spin media."

**5,838,436**, "Multi-purpose quantum computing", Hotaling, et al. November 17, 1998, whose abstract states, "Method and apparatus are provided for a general purpose photonic computer... Thus the present invention teaches a novel exploitation of photon-induced, quantum-mechanical spin transitions in spin media."

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**Incorporated As Reference, Re Section D.8. In Inventors' Response**

- Brun, T., Wang. H., Coupling Nanocrystals To A High-Q Silica Microsphere: Entanglement In Quantum Dots Via Photon Exchange, arXiv:quant-ph/9906025
- Liang, W., M, Bockrath, D. Bozovic, J. Hafner, M. Tinkham & H. Park, Fabry-Perot Interference In A Nanotube Electron Waveguide, Letter to nature, Nature, Vol. 411, 7 June 2001
- Mekis, A., J. U. Nockel, G. Chen, A. D. Stone and R. K. Chang, Ray chaos and Q-spoiling in Lasing Droplets, Phys. Rev. Lett. 75, 2682 (1995)
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- Nockel, Jens., A. Douglas Stone, Chaotic Light: A Theory Of Asymmetric Resonant Cavities Arxiv:Physics/0203063 V1 21 (Mar 2002)

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**Incorporated As Reference, Re Section E.7. In Inventors' Response**

**7,112,330**, Method for producing yeast expressed HPV types 6 and 16 capsid proteins, Buonamassa, et al., September 26, 2006

**7,105,303**, Antibodies to hepatitis C virus asialoglycoproteins, Ralston, et al., September 12, 2006,

**7,094,409**, Antigen arrays for treatment of allergic eosinophilic diseases, Bachmann, et al., August 22, 2006

**RE39,229**, Binding proteins for recognition of DNA, Choo , et al., August 8, 2006

**7,060,291**, Modular targeted liposomal delivery system, Meers, et al., June 13, 2006

**7,063,860**, Application of lipid vehicles and use for drug delivery, Chancellor, et al., June 20, 2006

**7,048,949**, Membrane scaffold proteins, Sligar, et al. May 23, 2006.

**Incorporated As Reference, Re Section E.8. In Inventors' Response**

**7,118,740**, Method for limiting the growth of cancer cells using an attenuated measles virus, Russell, et al. October 10, 2006.

**7,118,738**, Recombinant pox virus for immunization against MUC1 tumor-associated antigen, Schlom, et al. October 10, 2006

**7,112,337**, Liposome composition for delivery of nucleic acid, Huang, et al. September 26, 2006.

**7,108,863**, Liposome composition for improved intracellular delivery of a therapeutic agent, Zalipsky, et al. September 19, 2006.

**7,101,570**, Liposome compositions and methods for the treatment of atherosclerosis, Hope, et al. September 5, 2006.

**7,101,532**, Liposome containing hydrophobic iodine compound, Aikawa, et al. September 5, 2006

**7,037,520**, Reversible masking of liposomal complexes for targeted delivery, Smyth Templeton, May 2, 2006

**7,033,834**, Methods and means for targeted gene delivery (using viral capsids) Valerio, et al. April 25, 2006.